

Aiham Gotani¹
Ariel Fuchs²

HOW TO MAINTAIN A QUALITY ENVIRONMENT IN HOSPITALS

Abstract: *The main focus of this paper is on maintaining a high quality environment in hospitals, which is essential for the safety and well-being of patients, staff, and visitors, and to some extent even promotes healing. We have divided the paper into three main sections: Physical Environment, Healing by Design - Comfortable and even Positive Environment, and Socio-emotional Environment.*

Keywords: *quality environment, hospital, patients, safety, well-being, Patient-centered*

1. Introduction

Maintaining a quality hospital environment is critical to the safety and well-being of patients, staff, and visitors, and to some extent may even aid in the healing process. To promote this quality hospital environment, we must focus our attention on the physical environment, the ability to create a comfortable environment, and the patient's socio-emotional environment. By physical environment we mean: cleanliness, adequate ventilation, sufficient space, waste disposal, hand hygiene. By pleasant environment we mean: Natural light, colors and textures, art and nature, privacy and personalization, comfortable furnishings, clear pathways. And we use the term socio-emotional environment to help patients, staff and visitors have a positive experience, even under difficult circumstances: Empathy, compassion and communication.

2. Physical environment

In the Physical Environment section, we listed several factors that contribute to maintaining a quality environment in hospitals, such as cleanliness, adequate ventilation, sufficient space, waste

management, and hand hygiene.

Cleanliness means that regular cleaning and disinfection of all surfaces, equipment and patient rooms is critical to prevent the spread of infection. Ensure cleaning protocols are followed correctly and staff are trained to maintain hygiene standards (Peters et al., 2018).

Adequate ventilation means that good ventilation can help reduce the risk of airborne infections. Ventilation systems in hospitals should be inspected regularly and air filters replaced as needed (Elsaid et al., 2021).

Adequate space means that adequate space for patients and staff can help prevent the spread of infections. Staff must ensure that patient rooms, waiting areas, and other public spaces have adequate space to maintain social distance (CEP et al., 1996; Kader, 2023).

The importance of waste management is that proper waste disposal is essential to maintaining a clean and safe environment. Personnel must ensure that all waste is disposed of properly and that hazardous waste is disposed of in accordance with local regulations (WHO, 2017).

It is important that staff, patients, and visitors practice good hand hygiene. Provide hand sanitizers and hand washing stations throughout the hospital and ensure that staff are trained in proper hand hygiene (Gaube, Fischer, & Lermer, 2021).

3. Healing by Design - Comfortable and even Positive Environments

In Healing by Design - Comfortable and even Positive Environments, we explain how incorporating natural elements such as natural light, plants, and views of nature into hospital design can have a positive impact on health and well-being. We also mention how the use of colors and textures, art and nature, privacy and personalization, comfortable furniture, and clear wayfinding can help create a warm and welcoming environment for patients. The meaning of Comfortable Environment is that patients should feel as comfortable as possible during their stay in the hospital. This can be achieved by providing comfortable beds, adequate lighting and temperature control, and amenities such as TV, books, or games.

From the perspective of biophilic design theory, we can assume that humans have an innate connection to nature and that incorporating natural elements into design can have a positive impact on health and well-being. This may include the use of natural light, plants, and views of nature in hospital spaces (Wilson, 2000; Heerwagen, 2009; Kellert, 2018).

By the term natural light, we mean a positive effect on mood and well-being. Wherever possible, hospital rooms should be designed to maximize natural light and views to the outdoors (Tekin, Corcoran, & Gutiérrez, 2023).

By the term color and texture, we mean the use of color and texture in hospital spaces that can help create a warm and inviting environment. Use warm colors and natural

materials such as wood or stone to create a calming and comfortable atmosphere (Dalay, 2020).

By art and nature, we mean that incorporating art and nature into hospital spaces can help create a sense of calm and relieve stress. This may include displaying artwork or photographs, creating green spaces or gardens, or providing views of nature (Samir, 2021).

By privacy and personalization, we mean the fact that hospital spaces should be designed to provide privacy and allow patients to personalize their environment. This may include providing private rooms with ensuite bathrooms, allowing patients to bring personal items such as photos or blankets, and providing space for visitors to spend time with patients (Fuchs, 2001; Xiong et al., 2019).

By comfortable furnishings, we mean comfortable and supportive furniture that can provide a sense of comfort and well-being. Provide comfortable chairs, sofas, and beds, as well as pillows and blankets for patients (Olausson et al., 2021).

By clear wayfinding, we mean clear and easy-to-understand wayfinding that can help reduce stress and confusion for patients and visitors. This includes clear signage, maps and directions, and color-coded floors or areas to help patients find their way around the hospital (Chen, Ko, & Hsieh, 2021).

4. Socio-emotional environment

In the section on the socio-emotional environment, we emphasize the importance of empathy and compassion, as well as clear and effective communication in the hospital. We also mention the need to provide patients with a spiritual or cultural space and support. The importance of empathy and compassion is that patients and their families are often in distress and need emotional support. Hospital staff should be trained to show empathy and compassion toward patients

and their families, to listen to them, and to respond to their needs (Su et al., 2020).

Communication means that clear and effective communication is essential in a hospital. Patients and their families should be informed about their care and treatment, and staff should communicate effectively to ensure that patients' needs are met (Hapsari et al., 2022).

Nonetheless, offering spiritual or cultural space and support is part of the process (Saad & de Medeiros, 2016; Kader, 2023).

5. Staff support, training and regular inspections

Hospital staff should be supported to provide quality care. This includes access to training and development opportunities, ensuring adequate staffing levels, and promoting staff well-being (Boamah, Read, & Spence-Laschinger, 2017).

We see that at the heart of everything we do to promote a quality hospital environment is not just the physical environment, but also education and training. This means that education and training are critical to maintaining a high-quality hospital environment (Peters et al., 2018). Ensure that staff are trained in infection prevention and control and that patients and visitors are educated on the importance of maintaining a clean and safe environment.

However, we believe that education is not enough and that something always needs to be done. Regular inspections and audits can help identify areas for improvement. This

includes gathering feedback from patients and their families, as well as staff, and using that feedback to identify areas for improvement. Ensure that inspections are conducted regularly and that any issues identified are addressed promptly.

6. Conclusion

Positive psychology is a field that focuses on promoting positive emotions, behaviors, and attitudes and has been applied to healthcare (Seligman & Csikszentmihalyi, 2000). Hospital spaces can be designed to promote positive emotions such as serenity and comfort and reduce negative emotions such as stress and anxiety (Ulrich, 2000).

Person-centered design theory is an approach that focuses on the needs and experiences of individuals and seeks to create spaces that are tailored to their needs. This may include designing hospital spaces that are comfortable, private, and allow for personalization (Boissy, 2020).

So, if we are willing to understand that the hospital environment should be customized so much to have a quality environment, we can claim that the key factor is the patient-centered methodology. This means that the care is tailored to the individual needs and preferences of each patient.

And furthermore, there are even heaps of evidence that environment design even improves medical outcomes (Ulrich, 2000; Schweitzer, Gilpin, & Frampton, 2004; Sternberg, 2009, DuBose et al., 2018).

References:

- Boamah, S. A., Read, E. A., & Spence Laschinger, H. K. (2017). Factors influencing new graduate nurse burnout development, job satisfaction and patient care quality: a time-lagged study. *Journal of advanced nursing*, 73(5), 1182-1195.

- CEP - Cochrane Effective Practice and OCG - Organisation of Care Group, Houghton, C., Meskell, P., Delaney, H., Smalle, M., Glenton, C., ... & Biesty, L. M. (1996). Barriers and facilitators to healthcare workers' adherence with infection prevention and control (IPC) guidelines for respiratory infectious diseases: a rapid qualitative evidence synthesis. Cochrane database of systematic reviews, 2020(8).
- Chen, M. S., Ko, Y. T., & Hsieh, W. C. (2021). Exploring the planning and configuration of the hospital wayfinding system by space syntax: a case study of Cheng Ching Hospital, Chung Kang Branch in Taiwan. *ISPRS International Journal of Geo-Information*, 10(8), 570.
- Dalay, L. (2020). The Impact of Biophilic Design Elements on the Atmospheric Perception of the Interior Space. *Uluslararası Peyzaj Mimarlığı Araştırmaları Dergisi (IJLAR)* E-ISSN: 2602-4322, 4(2), 4-20.
- DuBose, J., MacAllister, L., Hadi, K., & Sakallaris, B. (2018). Exploring the concept of healing spaces. *HERD: Health Environments Research & Design Journal*, 11(1), 43-56.
- Elsaid, A. M., Mohamed, H. A., Abdelaziz, G. B., & Ahmed, M. S. (2021). A critical review of heating, ventilation, and air conditioning (HVAC) systems within the context of a global SARS-CoV-2 epidemic. *Process Safety and Environmental Protection*, 155, 230-261.
- Fuchs, A. (2001). Home Internal Structure and the Personality Structure of Parents and Children in the City of Tel Aviv. Tel Aviv Uni, MA Thesis,
- Gaube, S., Fischer, P., & Lermer, E. (2021). Hand (y) hygiene insights: Applying three theoretical models to investigate hospital patients' and visitors' hand hygiene behavior. *PloS one*, 16(1), e0245543.
- Hapsari, M. K., Rivai, F., Thamrin, Y., Pasinringi, S. A., Irwandy, I., & Hamzah, H. (2022). Analysis of the Implementation of Effective Communication on Interprofessional Collaboration in the Inpatient Installation of Hasanuddin University Hospital. *Journal of Asian Multicultural Research for Medical and Health Science Study*, 3(1), 23-35.
- Heerwagen, J. (2009). Biophilia, health, and well-being. *Restorative commons: Creating health and well-being through urban landscapes*, 39-57.
- Kader, S. (2023). Designing the post-pandemic hospice environment: "The Last Place". In (Re) designing the Continuum of Care for Older Adults: The Future of Long-Term Care Settings (pp. 237-259). Cham: Springer International Publishing.
- Kellert, S. R. (2018). *Nature by design: The practice of biophilic design*. yale university press.
- Olausson, S., Wijk, H., Johansson Berglund, I., Pihlgren, A., & Danielson, E. (2021). Patients' experiences of place and space after a relocation to evidence-based designed forensic psychiatric hospitals. *International Journal of Mental Health Nursing*, 30(5), 1210-1220.
- Peters, A., Otter, J., Moldovan, A., Parneix, P., Voss, A., & Pittet, D. (2018). Keeping hospitals clean and safe without breaking the bank. summary of the Healthcare Cleaning Forum 2018.
- Samir, S. (2021). Biophilic design impact on Healthcare facilities interior design in Egypt. *Journal of Design Sciences and Applied Arts*, 2(1), 60-70.
- Saad, M., & de Medeiros, R. (2016). Programs of religious/spiritual support in hospitals-five "Whies" and five "Hows". *Philosophy, Ethics, and Humanities in Medicine*, 11(1), 1-4.
- Schweitzer, M., Gilpin, L., & Frampton, S. (2004). Healing spaces: elements of environmental design that make an impact on health. *Journal of Alternative & Complementary Medicine*, 10 (Supplement 1), S-71.

- Seligman, M. E., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction, 55(1), p. 5. American Psychological Association.
- Su, J. J., Masika, G. M., Paguio, J. T., & Redding, S. R. (2020). Defining compassionate nursing care. *Nursing ethics*, 27(2), 480-493.
- Sternberg, E. M. (2009). *Healing spaces*. Harvard University Press.
- Tekin, B. H., Corcoran, R., & Gutiérrez, R. U. (2023). A Systematic Review and Conceptual Framework of Biophilic Design Parameters in Clinical Environments. *HERD: Health Environments Research & Design Journal*, 16(1), 233-250.
- Ulrich, R. S. (2000). Evidence based environmental design for improving medical outcomes. In *Proceedings of the Healing by Design: Building for Health Care in the 21st Century Conference*, Montreal, Quebec, Canada (Vol. 20, pp. 3-1).
- Wilson, E. O. (2000). *Sociobiology: The new synthesis*. Harvard University Press.
- WHO - World Health Organization. (2017). Safe management of wastes from health-care activities: a summary (No. WHO/FWC/WSH/17.05). World Health Organization.
- Xiong, J., Ma, R., Chen, L., Tian, Y., Li, Q., Liu, X., & Yao, Z. (2019). A personalized privacy protection framework for mobile crowdsensing in IIoT. *IEEE Transactions on Industrial Informatics*, 16(6), 4231-4241.

Aiham Gotani

Gaia College,
Israel

aiham.go@walla.co.il

Ariel Fuchs

Gaia College,
Israel

ariel@gaia.college
